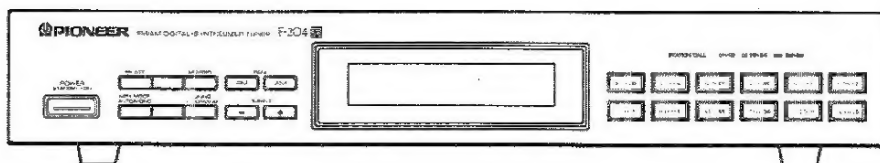


# Operating Instructions

FM/AM DIGITAL-SYNTHESIZER TUNER

# F-204



Thank you for buying this Pioneer product.  
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.  
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

**WARNING :** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

THE POWER SWITCH IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATE THE UNIT FROM MAINS POWER IN STANDBY POSITION.

## LINE VOLTAGE SELECTOR SWITCH

Only multi-voltage models are provided with this switch. Australian model is not provided with this switch.

Main voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.

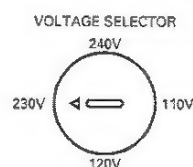
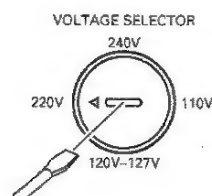
The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows.

1. Use a medium-size screwdriver.
2. Insert the screwdriver into the groove on the voltage selector, and adjust so that the tip of the arrow points to the voltage value of your area.

Set the voltage selector for the voltage in your area.

<Flat blade 2-pin  
AC plug model>

<Round 2-pin  
AC plug model>



## IMPORTANT



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**

**CAUTION:**  
**TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

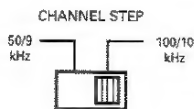
## CONTENTS

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### FM/AM CHANNEL STEP SWITCH

Only multi-voltage models are provided with this switch.  
Australian model is not provided with this switch.

The FM/AM CHANNEL STEP switch is located on the rear panel of the digital-synthesizer tuner. Before the tuner leaves the factory, this switch is set to the channel allotment plan of the area in which the tuner is sold. When the TUNING button is given a single push, the frequency display will change as follows:



#### [100 kHz/10 kHz] position:

Set to this position for areas with FM reception step of 100 kHz and AM 10 kHz.

#### [50 kHz/9 kHz] position:

Set to this position for areas with FM reception step of 50 kHz and AM 9 kHz.

#### NOTE:

*When unsure about the channel allocation for your area, consult your dealer for correct information.*

The channel step will not change if the CHANNEL STEP switch is operated with the power ON.

After operating the CHANNEL STEP switch, if you turn the POWER switch OFF and then ON again, the channel step will switch over.

If you operate the CHANNEL STEP switch, the station that were memorized before the switch was operated will be erased.

## FEATURES

### 36-station random FM/AM presetting

A total of up to 36 FM and AM stations can be preset in order to facilitate instant recall of your favorite stations in areas where the frequency bands are crowded with stations.

### MPX (multiplex) MODE switch

When MPX MODE switch is set to MONO, those stereo broadcasts that are drowned out by noise can be tuned in with greater clarity. The MONO reception mode can be preset for individual broadcasting stations.

## CHECKING THE ACCESSORIES

AM loop antenna ..... 1



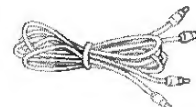
FM T-type antenna ..... 1



Control cord ..... 1



Audio cable ..... 1

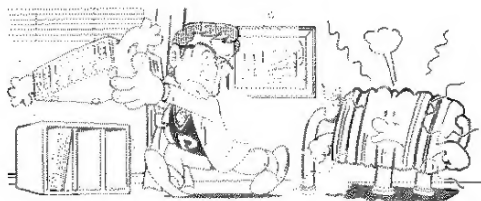


## INSTALLATION

### LOCATION

**Install the tuner in a well-ventilated location where it will not be exposed to high temperatures or humidity.** Do not install the tuner in a location which is exposed to direct rays of the sun, or near hot appliances or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the tuner in a damp or dusty environment may also result in a malfunction or an accident. (Also avoid installation near cookers, etc., where the tuner may be exposed to oily smoke, steam, or heat.)

Do not install the tuner on an unstable or inclined surface.



### CONDENSATION

When the unit is brought into a warm room from previously cold conditions or when the room temperature is suddenly increased, condensation may form inside and the unit may not be able to attain its full performance. To prevent this, allow the unit to stand for about an hour or raise the room temperature gradually.

### POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

### MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

# ANTENNA CONNECTIONS

**Radio reception is not possible unless the antenna is properly connected.**

The strength of broadcast signals varies from one area to another. Signal propagation is especially poor in metropolitan areas, where there are many tall buildings and in mountainous areas. Proper antenna installation is vital to good reception.

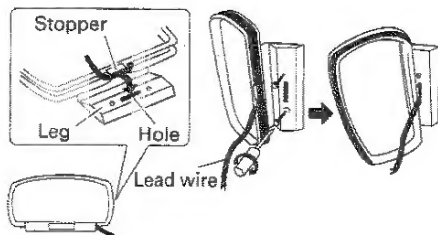
## AM ANTENNA

The AM loop antenna supplied with the tuner should be connected to the AM antenna terminals. The antenna should be placed at a distance from the tuner, and should not be allowed to touch metallic objects. Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.

### Setting Up the AM Antenna

- Insert the stopper on the bottom of the antenna into the hole on the leg.
- To permanently affix the antenna, screw the leg to a wall or something similar before assembling (affixing the antenna in the direction that gives the best reception).
- Place the antenna on a level surface and rotate it to locate the orientation that yields the best reception.

### AM Loop Antenna Set-up



### AM Loop Antenna Connection

The accessory AM loop antenna must be connected to ensure proper reception.



## External AM antenna

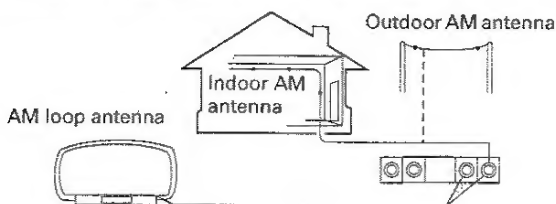
### Indoor AM antenna

Provide a vinyl-coated wire (5 to 6 meters long). Secure one end to the AM terminal and the other end to a wall or other high location.

### Outdoor AM antenna

If reception is still poor even when a lead antenna has been stretched out indoors, stretch out a vinyl-coated wire and secure it outdoors.

### Connecting the external AM antenna



### CAUTION:

Do not detach the AM loop antenna when using the external AM antenna.

## FM ANTENNA

### FM T-type Antenna Attachment

Connect the accessory FM T-type antenna to FM terminals. Stretch the antenna out to its full length, and affix it to a wall, etc.

Stretch out both ends.



Correct



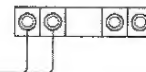
Wrong



Wrong



The accessory FM T-type antenna must be connected to ensure proper reception.

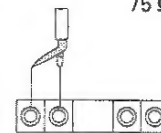


### External FM antenna installation

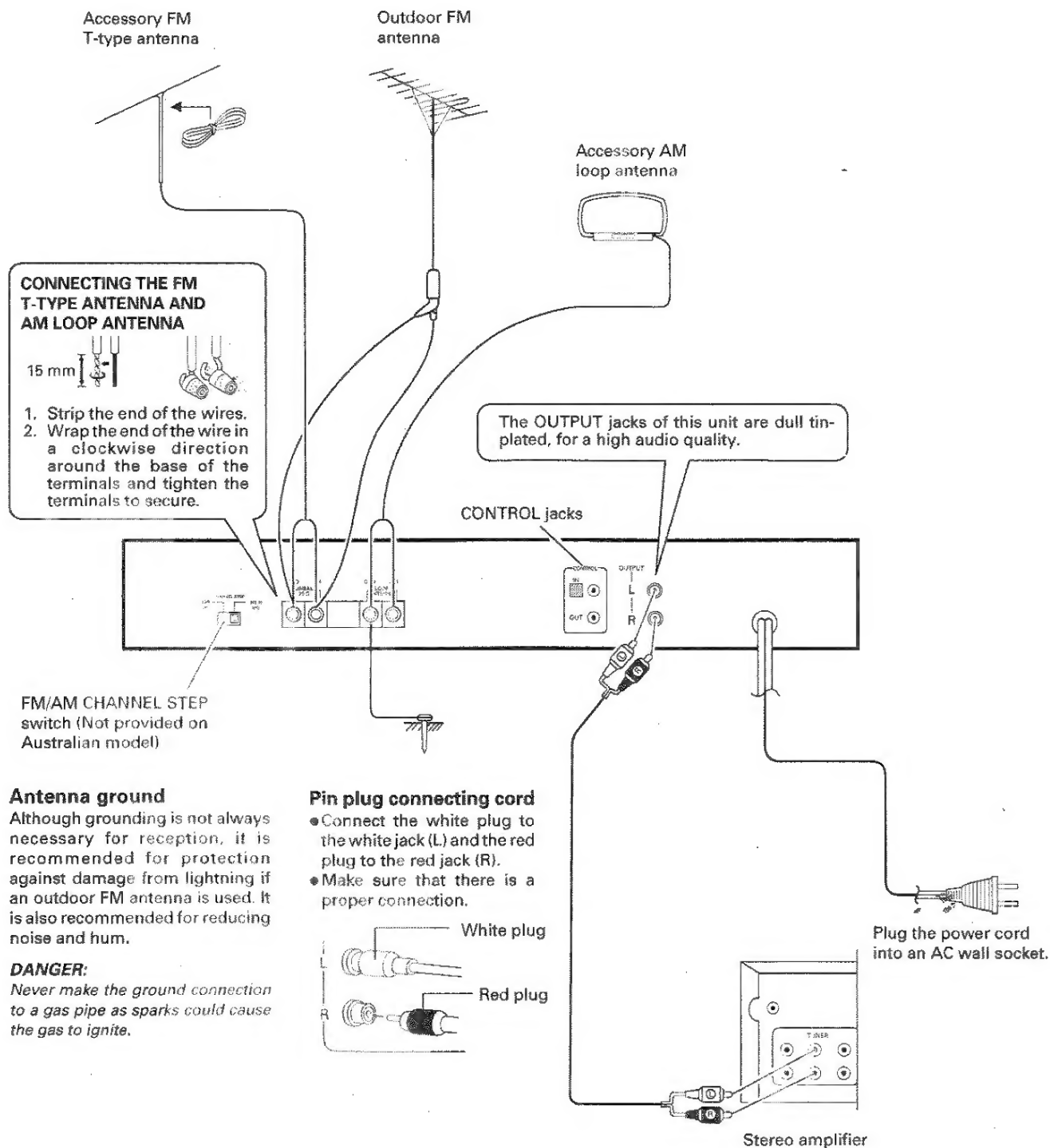
Use an external antenna when the signals from the station are weak and cannot be picked up by the accessory T-type FM antenna, or when the sound heard is accompanied by too much noise. It is recommended that you use only 75  $\Omega$  coaxial cable, so that the effects of extraneous noise are reduced to a minimum.

When the connecting cable is a 75  $\Omega$  coaxial cable

75  $\Omega$  coaxial cable



# CONNECTIONS



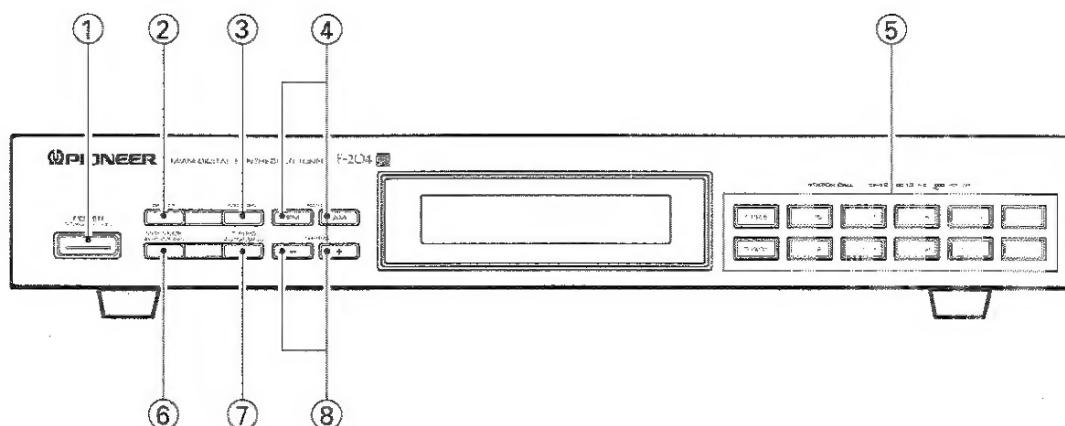
## ● CONTROL jacks

When using together with Pioneer component bearing an mark, connect the CONTROL IN jack on the rear panel of the tuner to the CONTROL OUT jack on the component using the supplied control cord. This will enable the tuner to be controlled from a distance, with the remote control unit supplied with the component.

When this feature is not used, connection is not necessary.

- For instructions regarding connection and operation, please refer to the operating instruction manual for your stereo component.

## FRONT PANEL FACILITIES



### ① POWER (STANDBY/ON) switch

**ON** ..... When set to the ON position, power is supplied and the unit becomes operational.

**STANDBY** .... When set to STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

Disconnect the power cord from the power outlet when you do not plan to use the unit for a long period of time.

#### NOTE:

- The memory will be backed up so long as the power cord is not unplugged.
- If the power cord is unplugged, the memory will only be retained for several days.

### ② RF ATT button

Set this button to ON when receiving strong FM signals (nearby stations) to reduce sound distortion. **RF ATT** indicator lights.

Normally, this button should be set to OFF. This button does not affect the AM reception.

#### NOTE:

This button's status is preset for each station in station memory.

### ③ MEMORY button

This button is used to memorize stations. When this button is pressed, the frequency indicator will flash. To memorize the frequency of any station, press the STATION CALL button while the frequency display is flashing.

### ④ BAND (FM/AM) selector buttons

These are used to select the band of the desired station.

The band switches alternately each time the button is pressed.

### ⑤ STATION CALL buttons

These are used to preset stations and to recall an already preset station.

### ⑥ MPX (multiplex) MODE AUTO/MONO button

Mode changes as follows each time this button is pressed:



This button does not affect the AM reception.

#### AUTO:

Depending on the broadcast station, STEREO, or MONO is automatically selected.

#### NOTE:

When the signal level is too weak for reception, sound output is automatically muted.

#### MONO:

To receive stereo broadcasts in monaural.

"MONO" indicator lights up.

#### NOTE:

This button's status is preset for each station in station memory.

### ⑦ TUNING AUTO/MANU (Manual) button

Use to select either the auto tuning mode or manual tuning mode for FM/AM reception.

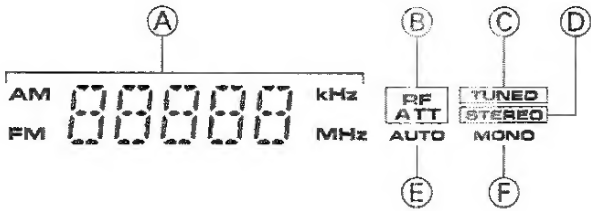
(When the auto tuning mode is selected, AUTO indicator will now light.)

### ⑧ TUNING (- (down)/+ (up)) buttons

These are used to locate the stations.

Press the "-" button for a lower, and the "+" button for a higher frequency.

Display section



**A Frequency display**

Shows the received broadcast frequency. Also gives scrolling display of main function status. The FM band is indicated by MHz, and the AM band by kHz.

**B RF ATT indicator**

Lights when the RF ATT button is set to on.

**C TUNED indicator**

Lights when a broadcast is received and tuned in well.

**D STEREO indicator**

Lights when a stereo broadcast is received. (The indicator does not light when the MPX MODE AUTO/MONO button is set to MONO.)

**E AUTO indicator**

Lights when the TUNING AUTO/MONO button is set to AUTO.

**F MONO indicator**

Lights when the MPX MODE AUTO/MONO button is set to MONO.

## OPERATIONS

### LISTENING TO FM OR AM BROADCASTS

1. Use the TUNING AUTO/MANU (Manual) button to select auto tuning mode or the manual tuning mode.

- When the auto tuning mode is selected, AUTO indicator will now light.

2. Use the BAND selector button to select either the FM or AM reception band.

- For FM broadcasts, the "FM" and "MHz" indicators will light.
- For AM broadcasts, the "AM" and "kHz" indicators will light.

3. Press the - (down) or + (up) of the TUNING buttons.

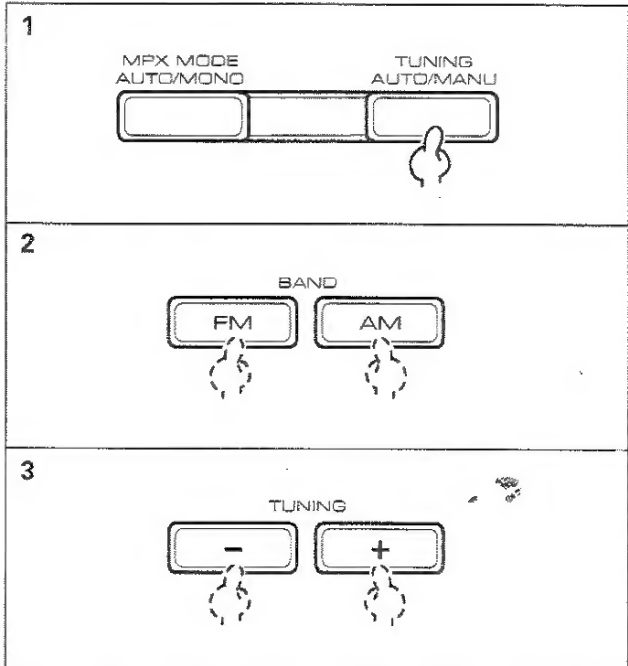
**Auto tuning FM, AM (MW):**

Press the TUNING - (down) or + (up) button until the frequency starts to change, then release it. The tuner will automatically search for a broadcasting station and stops when one is found, and the TUNED indicator lights up. To search for another station, press again.

**Manual tuning FM, AM:**

Press the TUNING - (down) or + (up) button and release quickly. The tuning frequency will change by one step each time the button is pressed. Press as many times as necessary to tune in the desired station. The TUNED indicator lights up when the station is tuned in best.

- If you keep the TUNING (-/+) button depressed after the frequency has begun to change, the reception frequency changes continuously, and stops when the button is released.



4. When you wish to receive a different station within the same band, repeat step 3. To receive a station on a different reception band, repeat steps 2 and 3.

5. Adjust the volume and tone of the stereo amplifier.

**NOTE:**

When AUTO TUNING is in use, reception may not be possible over long distances or when signals are weak. At these times MANUAL TUNING is recommended.

## OPERATIONS

### PRESETTING FM AND AM STATIONS

A total of 36 FM and AM stations can be memorized, i.e. 12 stations in MODE 1, 12 in MODE 2, and 12 in MODE 3.

#### 1. Use the **BAND** selector button to select either the **FM** or **AM** reception band.

- For FM broadcasts, the "FM" and "MHz" indicators will light.
- For AM broadcasts, the "AM" and "kHz" indicators will light.

#### 2. Use the **TUNING** (– (down)/ + (up)) buttons to tune in the desired station.

When memorizing an FM station, either press MPX MODE button to forcibly memorize the station in the monaural mode, or memorize the station in the auto stereo mode (with MPX MODE button left in the AUTO position).

#### 3. Press the **MEMORY** button.

- The display will flash (approx. 5 seconds).
- If the button is pressed again with the indicator flashing, the memory function will be canceled.

#### 4. Press the **STATION CALL** button.

While the display is flashing, press the button corresponding to the station which you wish to preset or re-preset.

When presetting a station to Mode 1 (e.g. presetting a station to No. 9):

By pressing the **STATION CALL** button once, the station will be preset to Mode 1 (1–12).

When presetting a station to Mode 2 (e.g. presetting a station to No. 21):

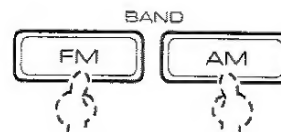
By pressing the **STATION CALL** button twice, the station will be preset to Mode 2 (13–24).

When presetting a station to Mode 3. (e.g. presetting a station to No.33):

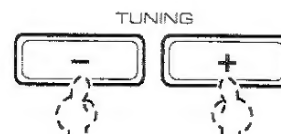
By pressing the **STATION CALL** button three times, the station will be preset to Mode 3 (25–36).

- After you press **STATION CALL** button, the display will flash for approx. 2 seconds, then the station will be memorized. If you press another button while the display is flashing, the station will not be memorized.

1



2



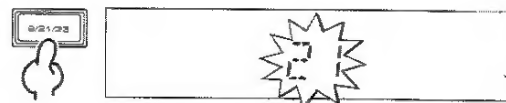
3



4



Press once.



Press twice.



Press three times.



### Preset station tuning

Press STATION CALL button into which the desired station has been memorized.

- To listen to a Mode 1 broadcast, press the button once, to listen to a Mode 2 broadcast, press it twice, and to listen to a Mode 3 broadcast, press it three times.
- By pressing STATION CALL button, the button number will be displayed, then the frequency will be displayed.

In this way, simple and accurate reception of any desired station is possible.

#### NOTE:

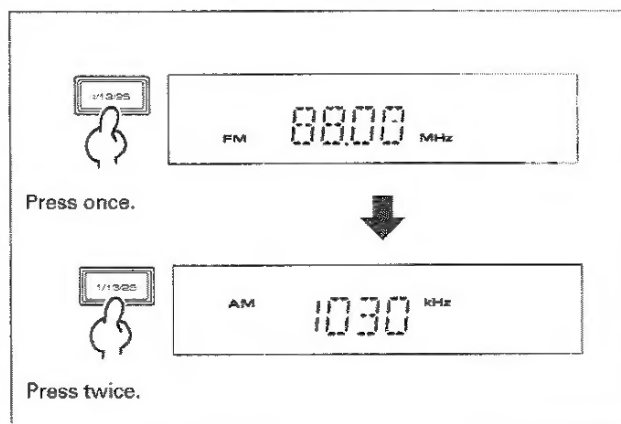
- The contents of STATION CALL buttons will be retained for several days, even if the power cord is unplugged.
- If a preset station has been erased, preset it again.

### Last station memory

- When POWER switch is pressed to turn power on, the last station received before the power was previously turned off will be received again.
- When power is ON, if BAND selector button is pressed, the last station received before BAND selector button was previously pressed, will be received again.

### Operation examples

If, for example, you wish to receive the station memorized in STATION CALL button "13" when listening to the station memorized in button "9", press button "1/13/25" twice.



### STATION CALL button "memo"

It is recommended that you make a note of the preset stations.

S.C. button	●	1	2	3	4	5	6	7	8	9	10	11	12
Name of broadcast station													
Frequency													
S.C. button	●●	13	14	15	16	17	18	19	20	21	22	23	24
Name of broadcast station													
Frequency													
S.C. button	●●●	25	26	27	28	29	30	31	32	33	34	35	36
Name of broadcast station													
Frequency													

## TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.

If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
No power.	<ul style="list-style-type: none"> <li>Has the power cord been disconnected?</li> </ul>	<ul style="list-style-type: none"> <li>Reconnect the power cord.</li> </ul>
No sound.	<ul style="list-style-type: none"> <li>Have any of the audio cables been disconnected or incorrectly connected?</li> <li>Has the antenna been disconnected or is the connection loose?</li> <li>Has the power cord been unplugged for several days? (Station memory has been lost.)</li> <li>Is the input selector on the amplifier set to TUNER?</li> </ul>	<ul style="list-style-type: none"> <li>Connect them properly to TUNER terminals on the amplifier.</li> <li>Connect the antenna properly.</li> <li>Memorize the preset stations once again.</li> <li>Select TUNER as the input source on your amplifier.</li> </ul>
Sound distortion. [On the FM band]	<ul style="list-style-type: none"> <li>Are the signals weak and reception poor?</li> <li>Static from other appliances (or automobiles) or multipath reflection (radio waves beamed off mountains and tall buildings and not received directly).</li> </ul>	<ul style="list-style-type: none"> <li>Substitute an FM outdoor antenna for the FM T-type antenna.</li> <li>Set MPX MODE button to MONO (reception will be in monaural).</li> <li>Try varying the height and direction of the antenna or use an FM outdoor antenna substituting a 75Ω coaxial cable for the standard cable and fixing it as far away as possible from the street.</li> </ul>
Sound distortion. [On the AM band]	<ul style="list-style-type: none"> <li>Is the AM loop antenna oriented poorly or located in an unsatisfactory position?</li> <li>Static from other electrical appliances (fluorescent lights/motors)?</li> </ul>	<ul style="list-style-type: none"> <li>Change the direction of the antenna until best reception is obtained as far as possible from tuner.</li> <li>Switch off other appliances or keep as far away as possible from the tuner when in use.</li> </ul>
Stereo broadcasts not received in stereo.	<ul style="list-style-type: none"> <li>Are the signals weak, with insufficient input?</li> <li>Is MPX MODE button set to MONO?</li> </ul>	<ul style="list-style-type: none"> <li>Change to an outdoor FM antenna.</li> <li>Press MPX MODE button to AUTO.</li> </ul>

Abnormal functioning of this unit may be caused by static electricity, or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.

## SPECIFICATIONS

### FM Tuner Section

Frequency Range .....	87.5 MHz to 108 MHz
Usable Sensitivity (IHF) .....	12.7 dBf (1.2 $\mu$ V/75 $\Omega$ )
50 dB Quieting Sensitivity .....	Mono : 18 dBf (2.2 $\mu$ V/75 $\Omega$ )
	Stereo : 38.3 dBf (22.6 $\mu$ V/75 $\Omega$ )
Signal-to-Noise Ratio .....	Mono : 78 dB (at 85 dBf)
	Stereo : 74 dB (at 85 dBf)
Distortion .....	0.3 % (1 kHz)
Alternate Channel Selectivity .....	60 dB (300 kHz)
Stereo Separation .....	40 dB (1 kHz)
Frequency Response .....	30 Hz to 15 kHz $\pm$ 1 dB
Image Response Ratio .....	50 dB
IF Response Ratio .....	90 dB
Antenna Input .....	75 $\Omega$ unbalanced
Output .....	650 mV (100 % MOD.)

### AM Tuner Section

Frequency Range .....	
Australian model .....	531 kHz 1,602 kHz
Multi-voltage model .....	531 kHz 1,602 kHz (step 9 kHz)
	530 kHz 1,700 kHz (step 10 kHz)
Sensitivity (IHF, Loop antenna) .....	350 $\mu$ V/m
Selectivity .....	20 dB
Signal-to-Noise Ratio .....	50 dB
Antenna .....	Loop Antenna
Output .....	150 mV (30 % MOD.)

### Miscellaneous

#### Power Requirements

Australian model .....	a.c. 240 Volts ~ , 50/60 Hz
Multi-voltage models	
<Flat blade 2-pin AC plug model> .....	AC 110/120 —127/220/240 V
	(switchable), 50/60 Hz
<Round 2-pin AC plug model> .....	AC 110/120/230/240 V
	(switchable), 50/60 Hz

Power Consumption .....	10 W
Dimensions .....	420 (W) x 70.0 (H) x 284 (D) mm
Weight (without package) .....	2.6 kg

### Furnished Parts

FM T-type antenna .....	1
AM loop antenna .....	1
Audio cable .....	1
Control cord .....	1
Operating instructions .....	1

#### NOTE:

Specifications and design are subject to possible modification without notice due to improvements.

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